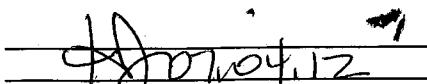
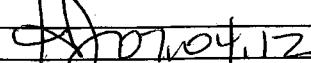


Date: Thursday, 4/12/2007 8:46:16 AM  
 User: Kim Johnston

## Process Sheet

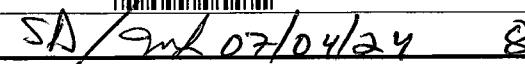
Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BRACKET ASSEMBLY	
Job Number	: 31732		Part Number	: D3183044	
Estimate Number	: 10291		Drawing Number	: D3183 REV C1	
P.O. Number	: N/A		Project Number	: N/A	
This Issue	: 4/12/2007 S.O. No. : N/A		Drawing Revision	: C1	
Prsht Rev.	: NC		Material	: N/A	
First Issue	: N/A		Due Date	: 5/5/2007	
Previous Run	: 29821		Qty:	8 Um: Each	
Written By	: 				
Checked & Approved By	: 				
Comment	: Est Rev: Pick A 04.02.18 New issue KJ/DS				

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	M174B2000X01500	17-4 SS Bar 
		
		Comment: Qty.: 0.4812 f(s)/Unit Total : 3.8497 f(s) Material: 17-4 SS Bar per AMS 5604/5643 (M17-4-B1.500x02.000) Identify for D3183-4 Batch: <u>M14579</u>
2.0	BAND SAW	BAND SAW 
		
		Comment: BAND SAW Cut blanks: (1.500" x 2.000") 5.500" long
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1 
		
		Comment: HAAS CNC VERTICAL MACHINING #1
		1-Machine D3183-4 as per Folio FA322 and Dwg D3183 Identify as D3183-4
		2-Deburr
		3-Scribe batch number

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE 	
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE	 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No  DQA:  Date: 07/05/01  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/04/23	3.0	2 parts scrap. 1 part in drill bit broke in the material. 2nd part, the axis moved over night, and did not re-zero this morning when the machine was started.	Q51042	2 parts scrap & destroy. Replace.	SD 07/04/23	SD 07/04/25	Q51042	07/04/23

NOTE: Date & initial all entries

Date: Thursday, 4/12/2007 8:46:16 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 31732

Part Number: D3183044

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

MS 07/04/25

8

6.0 D312121 Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Qty Part Number Description Batch  
2 D3121-21 Bolt B29828



ML07/04/30

7.0 D3183045 Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Qty Part Number Description Batch  
2 D3183-045 Bearing Ass B29731 x8 B30004 x2

331762 x6 ML07/04/30

8.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



X8

Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-043 as per Dwg D3183.

ML07/04/30

9.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB 07/04/130

8

10.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 51234

C-7/4/20

7/4/30 SP ⑧

⑧

11.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

SP 07/05/01

Job Completion



W 07/04/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	31732
Description: Bracket		Part Number:	D3183-4
Inspection Dwg: D3183	Rev: C1		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

First Article  Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	1.190	/			
R0.063	+/-0.010	0.063	/			
0.182	+/-0.010	1.82	/			
0.070	+/-0.010	0.070	/			
0.100	+/-0.010	1.01	/			
Ø0.201 x 0.100	+/-0.010	Ø0.201 x 1.00	/			
0.182	+/-0.010	1.82	/			
5.32	+/-0.030	5.32	/			
5.036	+/-0.010	5.035	/			
2.120	+/-0.010	2.12	/			
1.290	+/-0.010	1.290	/			
0.365	+/-0.010	0.365	/			
0.218	+/-0.010	0.218	/			
1.030	+/-0.010	1.028	/			
1.90	+/-0.030	1.90	/			
1.012	+/-0.010	1.012	/			
Ø0.201 x 0.100	+/-0.010	Ø0.201 x 1.00	/			
0.182	+/-0.010	1.82	/			
0.786	+/-0.010	0.785	/			
Ø0.392	+0.002/-0.000	0.392	/			
R0.19	+/-0.030	1.19	/			
3.954	+/-0.010	3.955	/			
0.162	+/-0.010	0.162				
R0.19	+/-0.030	1.19	/			
R0.25	+/-0.030	0.25	/			
4.26	+/-0.030	4.26	/			
2.800	+/-0.030	2.800	/			
Calculated dimension						
0.162	+/-0.010	0.160	/			
0.615	+/-0.010	0.615	/			
0.435	+/-0.010	0.436	/			
0.200	+/-0.010	0.201	/			
0.381	+/-0.010	0.382	/			
0.032	+/-0.010	0.032	/			

Measured by:	SA	Audited by:	DA	Prototype Approval:	N/A
Date:		Date:	02/04/12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-044	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	04.06.15	Dimension 2.800 was 2.080; removed 1.155, 0.36 dimensions	KJ/JLM	
D	06.03.09	Dwg Rev update	KJ/JLM	

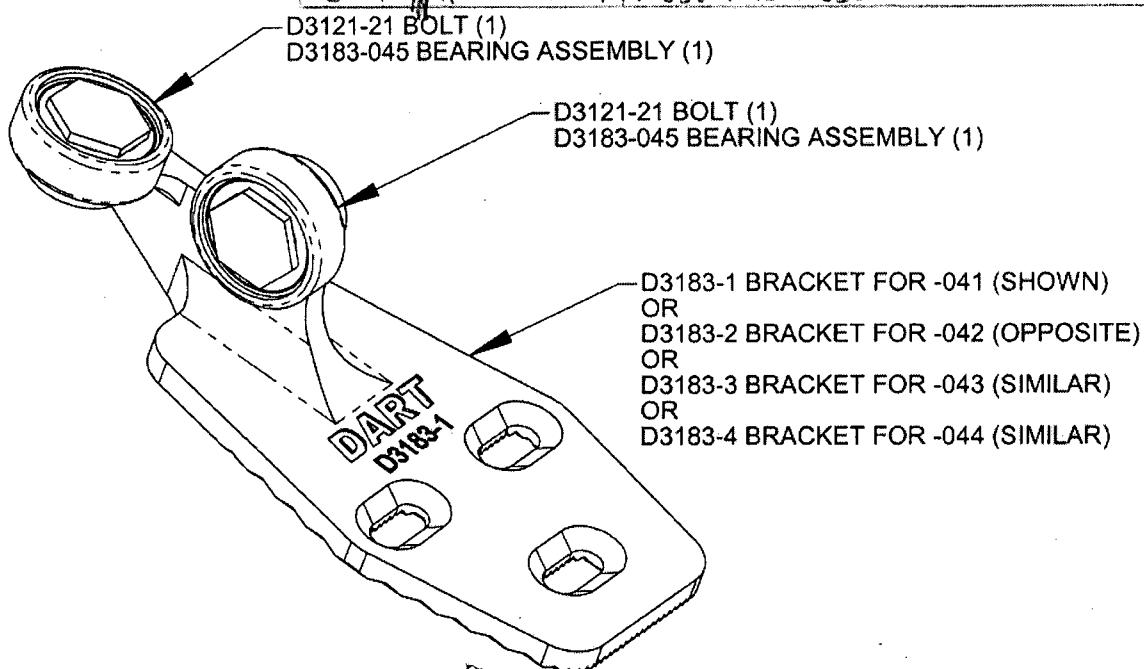


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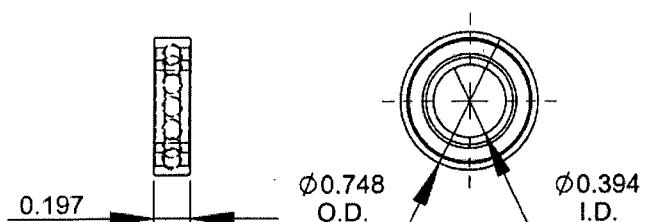
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CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 1 OF 4

DATE 04.02.17 TITLE SCALE 1:1  
BRACKET ASSEMBLY

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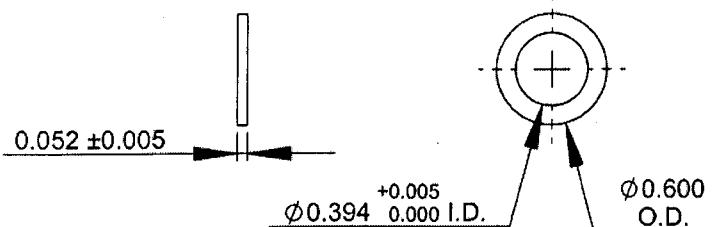


D3183-041 BRACKET ASSEMBLY (SHOWN)  
D3183-042 BRACKET ASSEMBLY (OPPOSITE)  
D3183-043 BRACKET ASSEMBLY (SIMILAR)  
D3183-044 BRACKET ASSEMBLY (SIMILAR)



#### D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



#### D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M308R)  
ENGINEERING  
ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSF978  
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WITHOUT NOTICE
- 4) ALL DIMENSIONS ARE IN INCHES

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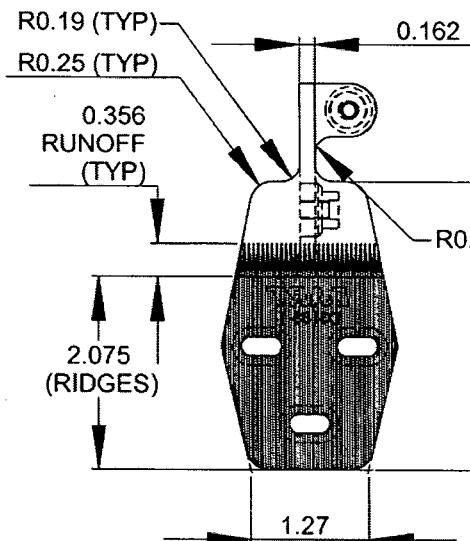
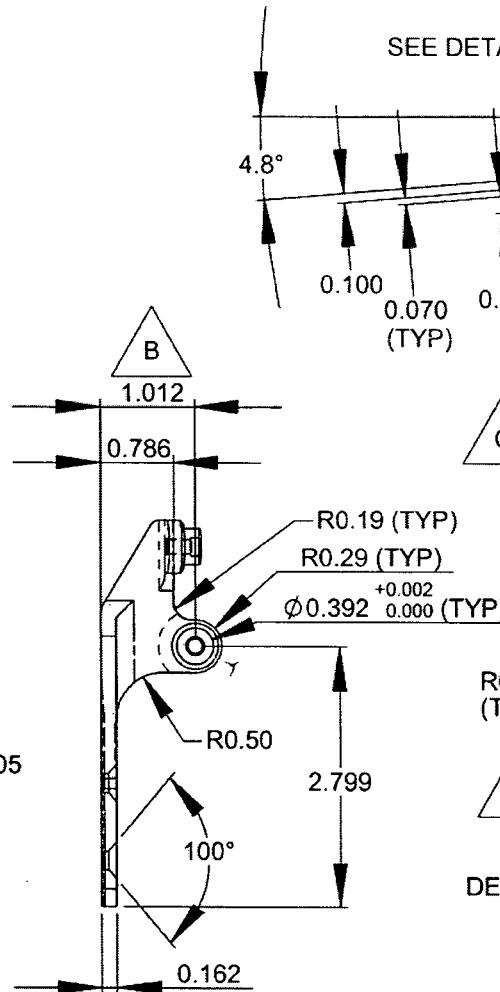
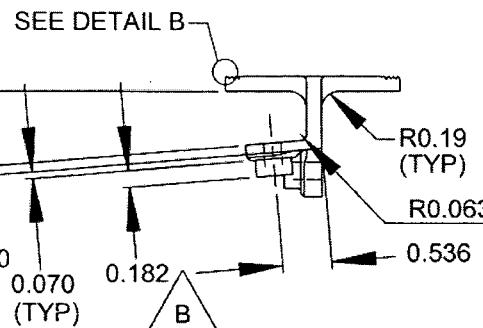
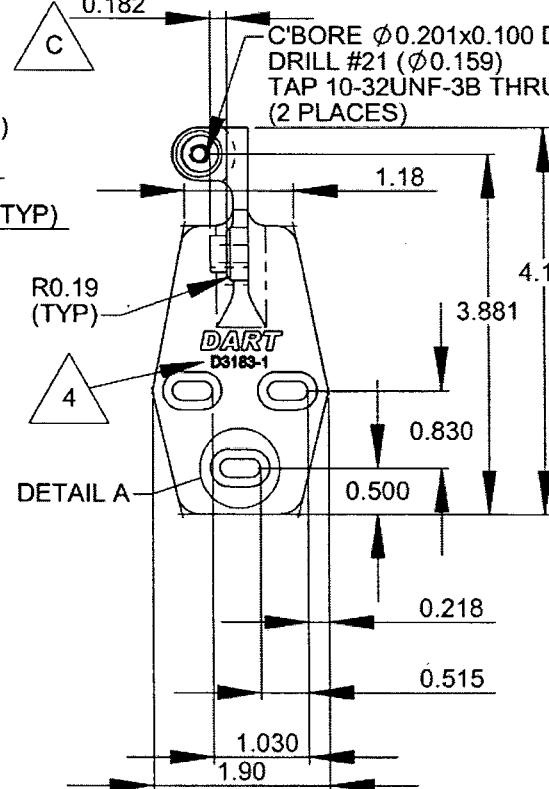
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		BRACKET ASSEMBLY
		SHEET 2 OF 4
		SCALE 1:2

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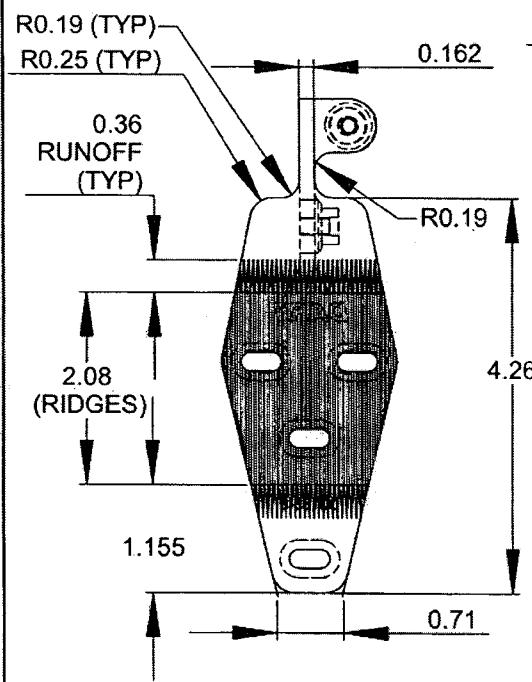


**D3183-1 BRACKET SHOWN**  
**D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS  
OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

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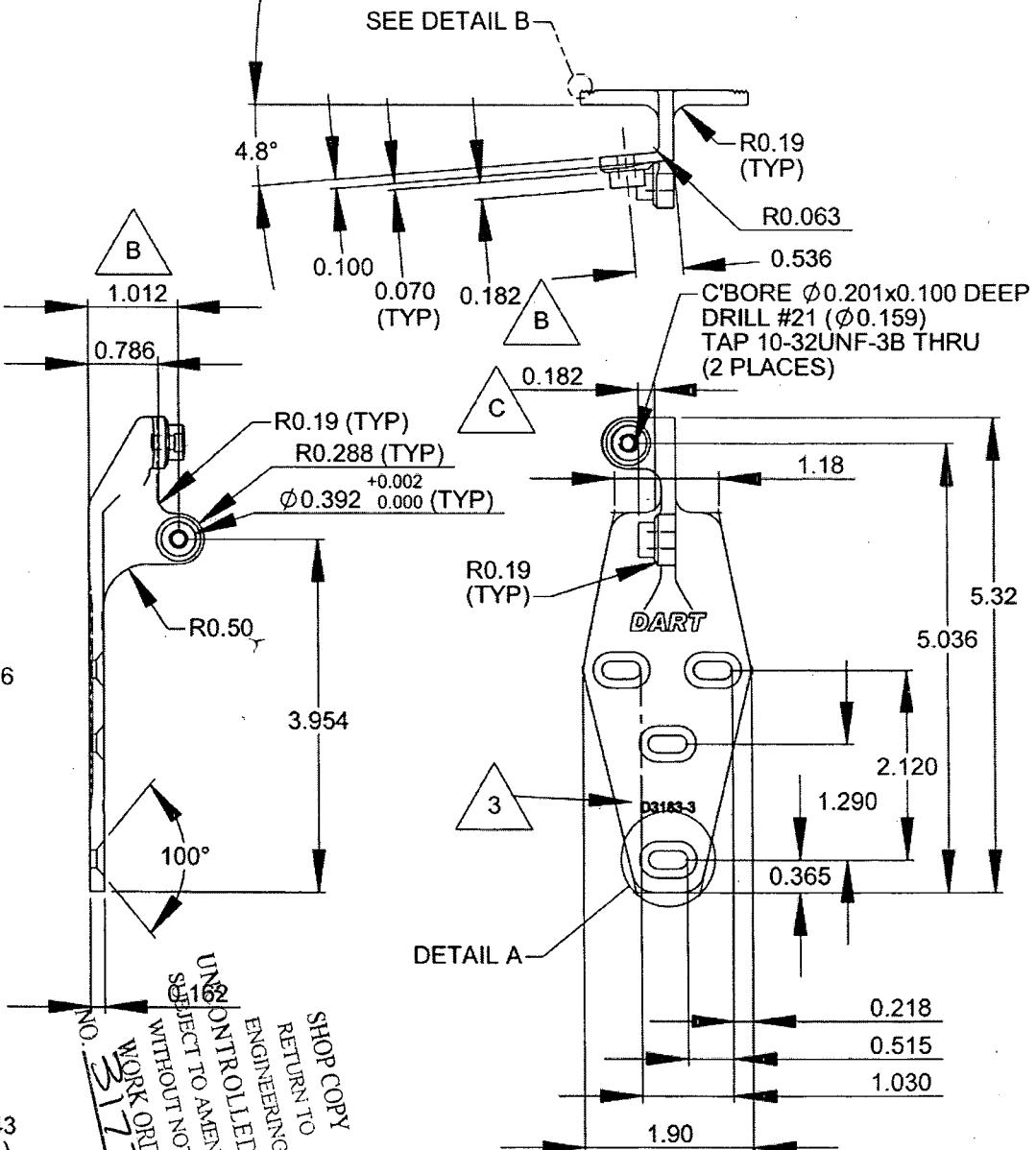
D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)

D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi

2) BREAK ALL SHARP EDGES 0.005 TO 0.015  
3) ENGRAVE DART P/N & LOGO AS SHOWN

4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
5) ALL DIMENSIONS ARE IN INCHES



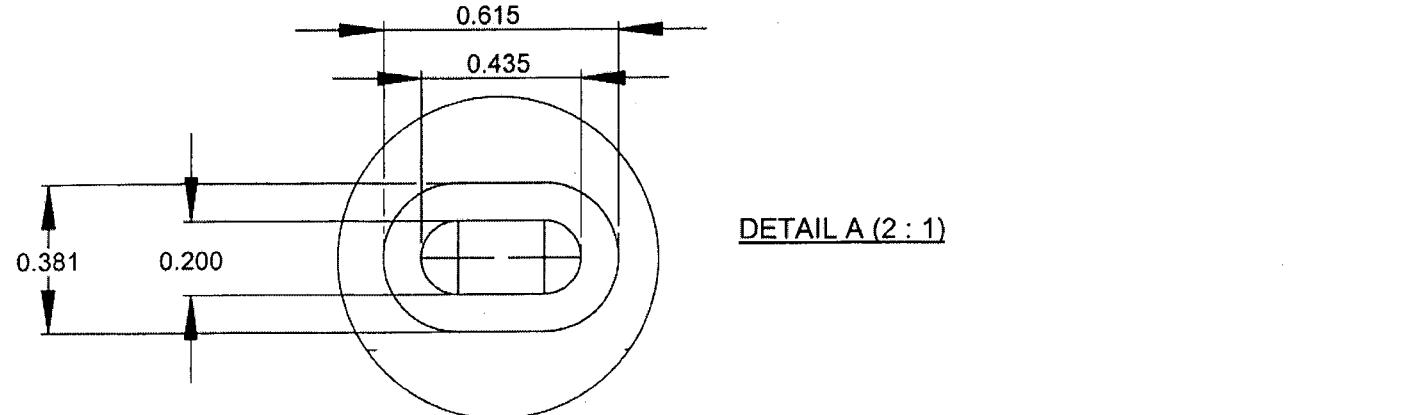
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DATE	04.02.17	TITLE
		BRACKET ASSEMBLY
		SHEET 3 OF 4
		REV. C
		SCALE 1:2

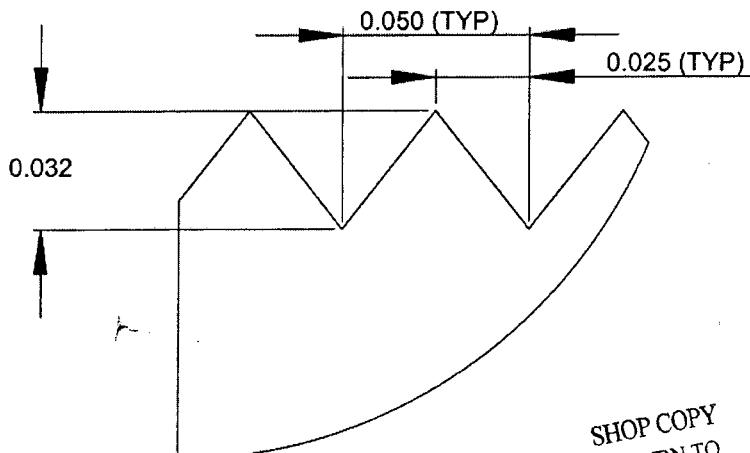


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DATE	04.02.17	TITLE	SCALE
		BRACKET ASSEMBLY	

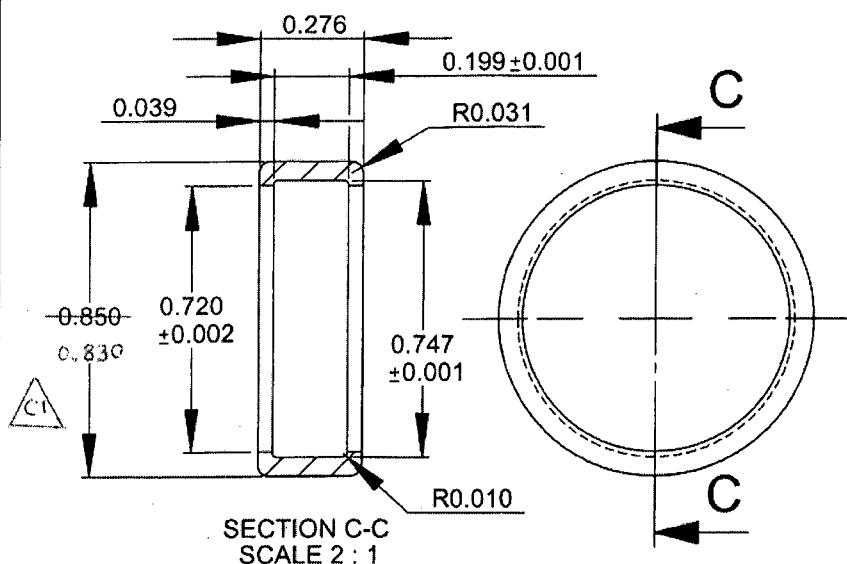


DETAIL A (2 : 1)

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DETAIL B (20 : 1)



SECTION C-C  
SCALE 2 : 1

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#### D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00 (REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

#### D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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